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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------------|------------------|
| 10/725,732 | 12/02/2003 | Tobias SieneI | 60,246-258/10781 | 3046 |
| 26096 | 7590 | 05/02/2006 | | |
| CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009 | | | EXAMINER CIRIC, LJILJANA V | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3753 | |

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/725,732

Applicant(s)

SIENEL ET AL.

Examiner

Ljiljana (Lil) V. Ciric

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003 and 27 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>08122005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on August 12, 2005 was filed before the mailing date of the first Office action on the merits herewith. The submission is thus in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings are objected to because the line quality is generally poor. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because it fails to clearly summarize the applicant's invention. More particularly, the abstract (and especially the first and second sentences thereof as

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written) fails to clearly specify that the circulation of the liquid is reversed during the freeze protection mode. Correction is required. See MPEP § 608.01(b).

4. The disclosure is objected to because of the following informalities: the second sentence of paragraph [0003] is not clear as written (i.e., it is not clear what is meant by the phrase “when the liquid to be heated is *lower*,”); and, the second sentence of paragraph [0004] also is not clear as written (i.e., it is not clear what is meant by the phrase “in *low* ambient conditions”) .

Appropriate correction is required.

Claim Objections

5. Claims 10 through 12 are objected to because of the following informalities: “located” or similar should be inserted immediately preceding “outdoors” [claim 10, line 3] for improved grammatical correctness and readability; and, “storage” should be inserted immediately preceding “reservoir” [claim 10, line 5; claim 10, line 6] for improved consistency.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1 through 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is insufficient antecedent basis in the claims for the following limitations in the claims, for example: “the fluid” [claim 1, line 6, both occurrences; claim 2, lines 2-3 and 4-5; claim 3, line 1]; “the heat pump” [claim 6, line 4; claim 6, line 6; claim 7, line 4; claim 7, line 6; claim 9, line 1]; and, “the water” [claim 10, lines 6-7; claim 10, line 8; claim 11, line 2; claim 11, line 3].

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Also, the claims repeatedly refer to the parts of the heat pump (i.e., the at least one pump) being operational “when the heat pump is off”. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “off” in the claims is used by the claims to essentially mean “operating in a freeze protection mode” while the accepted meaning is “*not* ON or NOT operating at all.” The term is indefinite because the specification does not clearly redefine the term. Recommend replacing the limitations reciting the heat pump as being “off” while the pump which is part of the heat pump is operating with limitations reciting the heat pump as operating in a freeze protection mode for improved clarity.

Finally, with respect to claim 10 as written, it is not particularly clear to which preceding element the indefinite term “it” appearing in line 3 of the claim refers. It is recommended that the term “it” be replaced in the claim with a direct recitation of whichever element the term is intended to refer to.

8. Claims 1 through 5 and 10 through 12 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: a condition-responsive controller or control means for reversing the flow direction of the fluid through the pump in response to specific conditions.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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10. As best can be understood in view of the indefiniteness of the claims, claims 1 through 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuroki et al. (made of record by applicant via the IDS).

Kuroki et al. discloses a heat pump system capable of performing defrosting operations essentially as claimed, including, for example: a water or fluid storage reservoir 2 which is located indoors and inherently has a “hot” or “warmer” section as well as a “cold” or “cooler” section; a heat pump C located outdoors at least in part and having a heat exchanger 5; at least one reversible pump 3 [see the descriptions of the third and fourth embodiments]. When the heat pump system of Kuroki et al. is “off”, i.e., not operating in its normal mode but rather operating in a defrosting mode, the fluid or water flow through the pump 3 is reversed as in the instant invention.

The reference thus reads on the claims.

11. Alternately for claims 1 through 3 and 5 and as best can be understood in view of the indefiniteness of the claims, claims 1 through 3, 5, and 10 through 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al.

Smith et al. discloses a heat pump system essentially as claimed, including, for example: a water or fluid storage reservoir which has a “hot” section 13 located deeper underground than a corresponding a “cold” section 12; a heat pump having a heat exchanger 2 or 5, the location of which may be indoors or outdoors and is immaterial; and, at least one pump 11 which reverses the water flow through the heat pump system under different operating scenarios.

The reference thus reads on the claims.

Conclusion


12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric whose telephone number is 571-272-4909. The examiner can normally be reached on Mondays through Fridays from 10:00 a.m. to 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel, can be reached at 571-272-4929.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ljiljana (Lil) V. Ciric
Primary Examiner
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